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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,578	08/17/2001	Blake Lewis	103.1072.01	5197

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EXAMINER	
LE, MIRANDA	
ART UNIT	**PAPER NUMBER**
2167	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/932,578	Applicant(s) LEWIS ET AL.	
	Examiner Miranda Le	Art Unit 2167	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 31 May 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or ~~PTO-1449~~ Paper No(s). _____
13. ☐ Other: _____.

JEAN M. CORRIELUS
PRIMARY EXAMINER

Miranda Le
June 16, 2005

Continuation of 11. does NOT place the application in condition for allowance because: Applicants' arguments do not overcome the final rejection.
Applicant's arguments have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference reasonably and properly meet the claimed limitation. Applicants are reminded that the Examiner is entitle to give the broadest reasonable interpretation to the language of the claimed as explained below. The Examiner is not limited to Applicants' definition which is not specifically set forth in the claims. In re Tanaka et al., 193 USPQ 139, (CCPA) 1977.

First, in response to the Applicant's argument that "because Sekido fails to disclose the inclusive OR'sed bitmap limitation, Sekido does not anticipate independent claims 25, 32, 35, 36, 37, the Applicant is once again reminded that Applicant has not defined that "a summary map is an inclusive OR bitmap of the vacancy bitmaps of the snapshots maintained by the file system" in the claims. It is proper to use the specification to interpret what the Applicant meant by a word or phrase recited in the claim. However, it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim. Therefore, it would not be proper for the examiner to give words of the claim special meaning when no such special meaning has been defined by the Applicant in the claim language. Thus, the Examiner's interpretation of the claim scope is consistent with term used.

Sekido anticipated independent claims 25, 32, 35, 37 by the following:
As per claim 25, Sekido teaches a method of operating a file system, said file system including an active map (i.e. bit map in Fig. 35) of information indicating in-use and free blocks (i.e. 0s or 1s), said file system maintaining a set of snapshots (i.e. SS1, SS2, SS3, SS4 in Fig. 29), each snapshot including a representation of said file system as it was at an earlier time (i.e. time stamp in Fig. 29), said method including:
computing a summary map (i.e. SS information in Fig. 27 and Fig. 35) in response to at least two copies of earlier active maps (i.e. bit maps ST1, ST2 in Fig. 35 shows the bit map 6 where 1s corresponds to valid block and 0s corresponds to invalid blocks).

As per claim 32, Sekido teaches in a file system including an active map (i.e. bit map in Fig. 35) of information indicating in-use and free blocks (i.e. 0s or 1s), said file system maintaining a set of snapshots (i.e. SS1, SS2, SS3, SS4 in Fig. 29), each snapshot including a representation of said file system as it was at an earlier time (i.e. time stamp in Fig. 29), said file system maintaining a summary map (i.e. SS information in Fig. 27 and Fig. 35) in response to at least one copy of an earlier active map in at least one of said snapshot, a method of updating said summary map, said method including:
receiving a request (i.e. the process of deleting a snapshot) to delete a selected snapshot (Fig. 28, col. 16, lines 23-44);
for a block used by said selected snapshot, indicating said block of free (i.e. to sense the physical positions of the valid blocks for all the logical address, col. 8, lines 62-63) in said summary map only in response to a snapshot just prior to said selected snapshot and in response to a snapshot just after said selected snapshot (col. 8, line 60 to col. 9, line 27).

As per claim 35, Sekido teaches in a file system including an active map (i.e. bit map in Fig. 35) of information indicating in-use and free blocks (i.e. 0s or 1s), said file system maintaining a set of snapshots (i.e. SS1, SS2, SS3, SS4 in Fig. 29), each snapshot including a representation of said file system as it was at an earlier time (i.e. time stamp in Fig. 29), said file system maintaining a summary map (i.e. SS information in Fig. 27 and Fig. 35) in response to at least one copy of an earlier active map in at least one of said snapshot, a method of updating said summary map, said method including:
selecting a set of blocks maintained by said file system for which to perform a write (i.e. the writing blocks are accumulated sequentially in the writing buffer on the memory 6, col. 15, lines 9-10) allocation operation (col. 14, line 51 to col. 15, line 21);
updating (i.e. to modify a snapshot, parent snapshot information and the time stamps for the stripes written between the creation of parent SS and that of the snapshot are stored as snapshot information on the disk 4, col. 14, lines 51-55) only a portion of said summary map (i.e. parent SS) corresponding to said set of blocks, in response to said selecting (col. 14, line 51 to col. 15, line 21); and
performing said write allocation operation (i.e. the writing blocks are accumulated sequentially in the writing buffer on the memory 6, col. 15, lines 9-10) in response to said updated summary map (col. 14, line 51 to col. 15, line 21).

As per claim 37, Sekido teaches in a file system including an active map (i.e. bit map in Fig. 35) of information indicating in-use and free blocks (i.e. 0s or 1s), said file system maintaining a set of snapshots (i.e. SS1, SS2, SS3, SS4 in Fig. 29), each snapshot including a representation of said file system as it was at an earlier time (i.e. time stamp in Fig. 29), said file system maintaining a summary map (i.e. SS information in Fig. 27 and Fig. 35) in response to at least one copy of an earlier active map in at least one of said snapshot, a method of updating said summary map, said method including:
while generating a consistency point (i.e. creating a snapshot holding the contains of the file at a specific time, col. 3, lines 8-9), selecting a set of block maintained by said file system and updating only a portion of said summary map (i.e. to modify a snapshot, parent snapshot information and the time stamps for the stripes written between the creation of parent SS and that of the snapshot are stored as snapshot information on the disk 4, col. 14, lines 51-55) corresponding to said of blocks (col. 2, line 53 to col. 3, line 21, col. 14, line 51 to col. 15, line 21).

Second, Applicant seems to be suggesting that Sekido does not disclose "snapmap" and "summary map". On the contrary, Sekido discloses a snapmap that refers to a file including a bitmap associated with the vacancy of blocks of a snapshot as "a snapshot creation process of creating a snapshot holding the contents of the file at a specific point in time" (col. 3, lines 8-19 and Fig. 35). As seen in Fig. 35, the bitmap ST1 and ST2 disclose the valid (i.e. free block) or invalid blocks of the snapshots SS1 and SS2.
Sekido teaches a summary map as "In a snapshot creation process, the bit map is also stored as snapshot information as shown in FIG. 35. In the process of judging an invalid block, a block in the invalid state is determined to be a invalid state by checking the bit map on the memory 6 and all of the bit map for the snapshot information" (col. 19, lines 11-16). As clearly seen in Fig. 35, the bitmap 6 (i.e.

summary map) comprises two bit maps ST1 and ST2, which associated with the snapshot SS1 and SS2 in the snapshot information. Sekido discloses the 0s and 1s in the bit map representing the valid or invalid block, and the time stamp (i.e. earlier active maps) for each snapshot is also discloses in the snapshot information (Figs. 27 and Fig. 35).

Third, with regards to claim 38, in response to applicant's argument that Rungta does not disclose consistency point, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In this particular case, the basis of the 35 USC 103 rejection is:

Sekido is directed to a snapshot management for creating a snapshot holding the contents if the files at a specific point in time for each of the nonvolatile storage devices and stores the created snapshot into the corresponding nonvolatile storage device. Sekido does not teach the step of "generating a consistency point, selecting a set of blocks maintained by said file system and updating only a portion of said summary map corresponding to said set of blocks." However, Rungta discloses the step of "generating a consistency point" as recited below:

"Archive unit 135 uses (indirectly) the snapshots created by snapshot unit 130 to archive consistent versions of open files" (col. 2, lines 34-36). This is understood that the files have been written to be consistent state.

Additionally, Rungta also teaches the step of "selecting a set of blocks maintained by said files system and updating the bit map associated with the snapshot" at col. 3, lines 9-10 as "the bitmap is initialized to indicate that all physical blocks points to the original file map are still unchanged"

As mentioned above, Sekido teaches the summary map comprises two bit maps ST1 and ST2 which associated with the snapshot SS1 and SS2 in the snapshot information, therefore, the step of updating or modifying an individual bit map (e.g. bitmap ST1 associated with snapshot SS1) would imply the step of updating or modifying a portion (i.e. ST1) of the summary map.

It is thus clearly evident that Sekido and Rungta, as combined, teach the step of "generating a consistency point, selecting a set of blocks maintained by said file system and updating only a portion of said summary map corresponding to said set of blocks". Applicant has made a piecemeal analysis of the references. Applicant is therefore reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments have been fully considered but they are not persuasive.